For Action

Audit, Risk and Compliance: Progress and Strategies to Address Toronto Transit Commission's "High Priority" Outstanding Recommendations from the Auditor General of Toronto

Date: September 19, 2019
To: TTC Audit and Risk Management Committee
From: Chief Executive Officer

Summary

On an annual basis, the City of Toronto Auditor General reviews the implementation status of outstanding audit recommendations and reports her results to City Council. In her May 15, 2019 report to City Council, titled *Auditor General's Report Toronto Transit Commission – 2019 Results of Follow-up of Previous Audit Recommendations,* five TTC-related audits were identified with high-priority outstanding recommendations. This report outlines significant progress to date, challenges to implementation and strategies to address the remaining high-priority outstanding recommendations for the following five reports:

- *Review of Toronto Transit Commission Procurement Policies and Practices: Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017*

- *Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration, 2014*

- *Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015*

- *Review of Toronto Transit Commission Accounts Payable Functions: Improving Invoice Verification and Vendor Account Management, 2017*

- *Continuous Controls Monitoring Program – Toronto Transit Commission, Employee Overtime and Absenteeism 2015, 2016*

Recommendations

It is recommended that the Audit and Risk Management Committee:

1. Receive this report for information; and

2. Forward a copy of this report to the TTC Board for information and for submission to the City of Toronto Audit Committee.

Financial Summary

The Auditor General has identified potential cost savings associated with some of the "High Priority" outstanding recommendations. Savings from these recommendations have been reflected in the 2019 budget with future incremental savings to be reflected in the 2020 budget submission. Details on cost savings can be found in the attachments to this report.

The CFO has reviewed this report and agrees with the financial summary information.

Equity/Accessibility Matters

There are no accessibility or equity impacts associated with this report.

Decision History

The Auditor General completes an annual review of outstanding audit recommendations and reports her results to the TTC Audit and Risk Management Committee, the TTC Board of Directors, the City Audit Committee and City Council.

[Auditor General's Report – Toronto Transit Commission – 2019 Results of Follow-up of Previous Audit Recommendations.pdf](#)

On June 28, 2019, the Auditor General presented the report to the City Audit Committee where a motion was passed and subsequently approved at City Council on July 17, 2019. The motion requires that the Chief Executive Officer, Toronto Transit Commission, provide an update on the "High Priority" outstanding recommendations from the Auditor General Report to the October 25, 2019 meeting of the City Audit Committee.

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.AU3.6

Issue Background

At the May 3, 2019 City Audit Committee meeting, a motion was made to request that the Auditor General (AG) bring forward to each meeting of the Audit Committee, a list of outstanding recommendations she considers to be "high priority."

In line with this mandate from the City Audit Committee, the *Auditor General's Report Toronto Transit Commission – 2019 Results of Follow-up of Previous Audit Recommendations* identified five reports where all partially implemented recommendations were high-priority.

Management has made significant progress on many of the high-priority recommendations. See below for a status summary of the fully and partially implemented recommendations from the five reports:

AG Report Title	Total No. of Recs	Fully Implemented	Outstanding/ Partially Implemented	Expected To Be Reported As Complete by Year End
Review of Toronto Transit Commission Procurement Policies and Practices: Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017	19	0	19	15
Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration, 2014	18	11	7	5
Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015	21	11	10	3
Review of Toronto Transit Commission Accounts Payable Functions: Improving Invoice Verification and Vendor Account Management, 2017	9	2	7	6
Continuous Controls Monitoring Program – Toronto Transit Commission, Employee Overtime and Absenteeism 2015, 2016	1	0	1	0
Total	68	24	44	29

Comments

Review of Toronto Transit Commission Procurement Policies and Practices: Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017

Management has made significant progress implementing the majority of the 19 recommendations relating to materials management and purchasing policies. A detailed description of actions taken to address the recommendation as well as strategies to address what remains outstanding has been outlined in Attachment 1 of this report.

Notably, the TTC has made significant inroads with respect to reducing incidents of parts shortage and turnaround. Bus Maintenance has launched an automated tracking report to monitor parts turnaround time at eight closed store locations, and is in the process of rolling out this tool to other locations. The transition to SAP/Maximo to improve parts processing has also commenced, and Bus Maintenance regularly works with Materials and Procurement (M&P) to shorten parts delivery times when contracts are up for renewal. As a result, very few buses are out of service due to the unavailability of parts. Challenges impacting the timeline for completion of some of the recommendations are noted below:

- *Widespread Organizational Change Takes Time and Requires Significant Co-ordination:* In order to implement a successful Aftermarket Parts Warranty Program, significant co-ordination amongst several departments and modes is required. Strategies to address organizational culture and change management, as well as changes to policy, software and technology are all necessary precursors for success and take time. In order to achieve sustainable success, the TTC has decided to conduct a gradual rollout of warranty pilots starting in one bus garage, with gradual implementation across all bus garages. After successful implementation within Bus, Streetcar and Subway will be pursued over a multi-year timeline.

  With respect to cores, linkages between core components and their related new and/or rebuild parts have been substantially completed. In addition, KPIs have been developed and a core tracking application rolled out to all bus locations. Identifying all core parts is a long and technical process however and more work needs to be done. Maintenance expertise, significant co-ordination with departments and dedicated resources is required. The TTC has engaged WSP consultants to provide technical guidance and identify best practices from other agencies.

- *Lack of Human Resources/High Turnover Resulted in Delays to Policies, Procedures and Reports:* The recommendations in this report required the creation and/or amendment of a total of 13 policies, procedures and reports. Limited resources and significant turnover in the M&P Department required a focus on activities first and procedures later. For example, the TTC increased its use of supplier blanket contracts to procure more than 60% for active parts, reduced its parts and purchase requisition backlogs by approximately 50%, and identified over 100 alternate parts to progress to testing stage. However, supplier blanket, purchase requisition and alternate sourcing procedures are still in the process of being finalized, and refresher training rolled out to staff. The procedures are expected to be in place by year end.

  Plans to expand the Purchasing-Card (P-Card) program were dependent on the hiring of a dedicated P-Card Administrator. The successful candidate began in September 2019 and will lead a full program review, including P-Card monitoring procedures and controls. In addition, they will ensure processes and controls are in place to support the increase in the P-Card purchase threshold for non-stock items to $3,000 (up from $250). This change is expected to reduce the number of low-value purchase requisitions by approximately 35% and could result in up to $25,000 in cash back rebates from increased P-Card use annually.

- *Testing is Required to Pursue Alternate Sourcing:* The TTC estimates that it can save approximately $3.9 million annually with alternate parts sourcing. In order to fully implement and achieve cost savings, alternate parts need to be tested for quality assurance with many parts requiring one year of testing as a minimum.

Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration, 2014

The purpose of this audit was to assess the effectiveness and efficiency of the TTC's bus maintenance and warranty programs. A subsequent internal assessment of the TTC's bus rebuild program resulted in a 72% reduction in rebuilds, as the program was deemed to be no longer cost effective due to changes in technology and standards.

GPS technology has been implemented on all buses and has increased the accuracy of kilometer reports used to schedule preventative maintenance. Warranty claims will result in an estimated $7 million in recovery for 2019. Despite excellent progress, which is further outlined in Attachment 2, challenges in implementing these recommendations delayed progress:

- *Major Strategic Change Requires a Phased Approach:* A 2015 study conducted by the TTC confirmed that rebuilding parts internally was no longer cost effective. A multi-year phased strategy has since been initiated by Bus Maintenance to gradually move from internally rebuilding engines to purchasing OEM manufactured engines with applied two-year warranties, and Duncan Shop no longer completes unit overhauls, but conducts out of warranty repairs.

- *Upgrading Software Is Complex and Time Consuming:* The Vehicle Work Order (VWO) system needs to be modified to support full implementation of two of the Auditor General's recommendations, i.e. Standard Repair Times (SRTs) must be integrated into the VWO to ensure labour hours are tracked and measured against the SRT. Additionally, modifications to the VWO are required to allow warrantable parts to be flagged by the system. These upgrades require time and dedicated resources from the Information Technology Services (ITS) Department.

Review of Toronto Transit Commission Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015

This audit addressed non-revenue vehicles and equipment, parts management, preventative maintenance and garage service. Much progress has been made as noted in Attachment 3 of this report, including the adoption of: a vehicle lifecycle model; a quality assurance process for repairs; maintenance status reports; and an annual departmental parts audit. Challenges in implementing other high-priority recommendations are described below:

- *Strategic Decision Making Needs to be Based on Good Data:* GPS data provides reliable information for determining vehicle utilization levels and optimizing scheduled maintenance. Once available, this data will inform strategic decisions on more efficient allocation of non-revenue vehicles across user departments, as well as more cost effective approaches to vehicle maintenance and lease/buy/shared services models for the fleet. GPS installation on non-revenue vehicles has been delayed by the TTC's supplier, Clever Devices, due to lack of staff, issues with its manufacturer and the requirement for additional testing in the TTC environment. Completion is targeted for Q4 2020.

- *Increasing Garage Capacity Requires New Garages:* Currently, the TTC requires additional garage capacity to significantly improve non-revenue fleet maintenance service turnaround time. Much of its maintenance is currently being performed at Lakeshore Garage, which is a shared facility with Wheel-Trans operations. Once opened, the new garage at 1810 Markham Road will be used for servicing non-revenue vehicles.

- *Lack of Dedicated Non-Revenue Fleet Resources:* Dedicated staff is required to improve service turnaround time and parts availability. Additional human resources will be allocated to the non-revenue department in 2020.

Review of Toronto Transit Commission Accounts Payable Functions: Improving Invoice Verification and Vendor Account Management, 2017

This report recommended improvements to the payments process, including invoice verification, expanding the use of Electronic Funds Transfer (EFTs), tightening of the cheque request policy and further vendor master file clean-up. In addition, opportunities were identified to reduce late payments, overcharges and duplicate billings. Considerable progress in implementing the outstanding recommendations are summarized in Attachment 4. Two key factors affecting the timeline for implementation are outlined below:

- *Interdependencies with Legislative Compliance Requirements:* On October 1, 2019, prompt payment requirements will come into effect under the new Construction Act, which requires that all construction and design invoices be paid within 28 days. After the 28th day, daily interest will accrue. In light of this, the TTC undertook a detailed review and overhaul of its payment process by:
    - o Establishing a working group of key stakeholders to analyze current bottlenecks;
    - o Consulting with the City's Prompt Payment Working Group;
    - o Hiring a law firm to review changes to contract language (new contracts will require vendors to accept payment by EFT; and
    - o Upgrading lien search and other databases.

- *Development of a Critical Control – Invoice Verification Program:* Management is focused on addressing a critical control deficiency across the TTC to drive improvement in the accuracy of invoice verification. In order to develop a comprehensive invoice verification program, staff revamped and delivered training, produced comprehensive procedural guidelines, developed a new spot audit process and created payment reports to identify further opportunities for training.

Continuous Controls Monitoring Program – Toronto Transit Commission, Employee Overtime and Absenteeism 2015, 2016

In this report, the AG recommended that the TTC implement department and corporate level reporting to monitor overtime and absenteeism. Historically, the TTC monitored overtime and absenteeism with individual departments using their own payroll data to create reports or by request through the Finance Department. With the introduction of SAP, the TTC is in a better position to create reports as part of a corporate-wide continuous monitoring program. Two key factors have contributed to a delay in the implementation of this recommendation:

- *Complexity of Technological Innovation:* An extended SAP project timeline caused by payroll complexities delayed the advancement of SAP's reporting capabilities for overtime and absenteeism.

- *Integrated Corporate Governance:* Additional time is required to develop a comprehensive corporate Absenteeism Strategy to inform the next steps in addressing root causes, including KPIs and reporting. Further consultations with the TTC Executive, operational

departments and ITS subject matter experts are required to finalize the Absenteeism Strategy.

A Corporate overtime report has now been successfully piloted in the Operations Group and a corporate-wide implementation plan will be developed by year end. The recommendation will be fully implemented with the rollout of the Absenteeism Strategy and associated reports.

Contact

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Signature

Rick J. Leary
Chief Executive Officer

Attachments

Attachment 1 – Progress and Strategy Table for *Procurement Policies and Practices: Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017*
Attachment 2 – Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase One: Bus Maintenance and Warranty Administration, 2014*
Attachment 3 – Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015*
Attachment 4 – Progress and Strategy Table for *Accounts Payable Functions: Improving Invoice Verification and Vendor Account Management, 2017*
Attachment 5 – Progress and Strategy Table for *Continuous Controls Monitoring Program – Toronto Transit Commission, Employee Overtime and Absenteeism 2015,*

Progress and Strategy Table for *Procurement Policies and Practices:*
Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#1 - Undertake necessary steps to maximize warranty claim rate and revenue for aftermarket parts including assessment of requirements	Significant coordination amongst departments to develop and implement a successful aftermarket parts warranty program A full assessment of resource and technology requirements is substantially completed Aftermarket Warranty Coordinator hired and trained on new vehicles Formal review processes kicked off with different maintenance groups	Resource and technological (IFS program) limitations Streetcar and subway maintenance are not on Vehicle Work Order systems and therefore cannot trigger parts requests Lack of parts serialization to properly track warranty Limitations of warranty period (commences from date of shipment vs date of installation) and inability to trace warranty terms, durations and start dates	Pilot at certain Bus garages underway for all prematurely failed parts - Expected to clarify roles, information gaps, documentation needed, vendor's reactions Working with ITS on pilot project for warranty parts identification and also for serialization feature in IFS for select parts Purchasing staff to survey market for changes to warranty claims process (e.g. terms, filing process, mandatory information) End state for this phase: - Tracking system of all warranty cases triggered by Operations and claims filed with vendors - Confirmation of warranty filing processes and requirements for Top ~10 vendors - Benchmarking of processes with other transit agencies/similar industry - Complete assessment for resource, process and technology requirements for longer term - Achieve Year 1 saving as targeted below **Timeline for Completion - April 2020** ***Estimated Savings for 2020 - $292,000***
# 2 - Undertake steps to improve the tracking and retrieving of cores	Core tracking application launched and rolled out to all bus locations KPI's for the core management process have been developed such as % of receipts/issued (recovery), outstanding parts list, turnaround time	Dependency on technical experts and maintenance teams A focused resource for major coordination between M&P and bus maintenance is required Space constraints - identification of cores is a manual process	Development of a report function in the core tracking application is expected by October 2019 - reports will flag potential issues in core management Application to be rolled out to Subway and Streetcar locations commencing in 2020 (pending successful launch of the Vehicle Work Order system at these locations)

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Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
	Linkages between core components and their related new and/or rebuild parts have been substantially completed Call documents (RFP & RFQ) for vehicles and parts have been amended to require the awarded suppliers to identify parts with potential core value	and space is needed to carry out the process Specifications for rebuilds have to be determined which is a lengthy process	Maintenance Departments will undertake core identification process and cost benefit analysis with input from M&P Engaged WSP industry expert to provide technical guidance and identify best practices from other agencies All locations equipped with the Vehicle Work Order system will be completed by December 2019 **Timeline for Completion – December 2019** ***Estimated Savings** - **Detailed analysis is still being completed to determine actual savings***
#3 - Review and address the parts shortages issue	Reduced new parts backlog by over 50% at the review stage and 70% at the parts creation stage Launched an automated tracker report to track KPIs including parts turnaround time Turnaround time is tracked at eight closed store locations and will progress to other locations Reviewed parts to minimize repetitive purchases - currently over 60% of requisitions are under Supplier Blankets (SBs) System controls to prevent unintended parts requests deletions were strengthened through control of access in the system	IFS system is cumbersome Dependency on temporary resources has impaired accuracy and efficiency Tracking turnaround time at open stores is not accurate due to unrecorded parts requests - at open stores manual forms are filled out by the store persons	Continuous monitoring of new parts backlog through tracker by management Supplier Blanket Standard Operating Procedure (SOP) will be amended to further promote its use with target completion date of October 2019 Analyze possibilities and features in newer Enterprise Resource Planning programs such as SAP/Maximo to improve parts processing time and tracking Tracking turnaround time for all locations equipped with the Vehicle Work Order system will be completed by December 2019 **Timeline for Completion - December 2019**
#4 - Review the current method of centrally	Significant progress has been made in reducing purchase requisition backlog - the	Lack of resources/staff and management turnover	The requirement to use the P-Card for materials under $3,000 will become effective by the end of 2019 and will

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Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
procuring low dollar purchases	number of outstanding purchase requisitions is under 1000, a decrease of approximately 47.4% as compared to the backlog of 1,900 found during the audit Starting in June 2017 users were required to use the Purchasing Card to acquire non-stock goods for orders valued at $250 or less (eliminating the need for Purchase Requisitions to be sent to M&P) The $250 threshold is planned to increase to $3,000 with the hiring of a new P-Card Administrator (newly created position) Purchase transactions up to $10,000 now only require one quote (increased from $4,000)		eliminate approximately 2,690 (35%) non-stock low-value purchase requisitions currently being processed by M&P A new P-Card Administrator started in September 2019 to support this initiative **Timeline for Completion – December 31, 2019** ***Estimated Savings - $25,000 annually in P-Card rebates may be realized from increased P-Card usage***
#5 - Ensure procurement policies and procedures provide clear directions and guidelines for Buyer's Discretion	Completed draft "Buyer Discretionary Purchases" SOP SOP clearly details directions and guidelines for Buyer's Discretion and applicability of the dollar threshold Some procedural changes have been implemented to comply with applicable trade agreements (CFTA, CETA)	Lack of resources/staff and management turnover	SOP will be finalized by end of September 2019 Procurement Policy and all related procedures will be Board approved and in effect by December 2019 **Timeline for Completion – December 31, 2019**
#6 - Implement measures to monitor compliance with Buyer's Discretion	Completed draft of "Buyer File Reviews" SOP, which requires management to regularly audit Buyer procurement files for compliance with requirements Buyer's discretion requirements have been communicated to staff	Lack of resources/staff and management turnover	SOP will be finalized by end of September 2019 **Timeline for Completion – December 31, 2019**

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Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#7 - Identify strategies to improve response rate for competitive procurement	Bid response time has been extended for compliance with CETA and review of tender documents is free of charge on the TTC's MERX website Updating of reports that will assist to identify a low bid response rate situation, thereby signaling to staff more potential bidders should be researched/solicited (invite five or more in lieu of 3)	Lack of resources/staff and management turnover	Working with ITS to update IFS requisition report to assist in identifying low bid response rates **Timeline for Completion – December 31, 2019**
#8 - Formalize process for seeking client input in bid evaluations	Completed draft of "Bid Evaluations" SOP	Lack of resources/staff and management turnover	SOP will be finalized and posted by end of September 2019 **Timeline for Completion – December 31, 2019**
#9 - Strengthen the TTC's current non-competitive procurement policy	Completed draft of "Non-Competitive Procurement" SOP M&P has commenced the use of NOI's (Notice of Intent)	Lack of resources/staff and management turnover	SOP will be finalized by end of September 2019 **Timeline for Completion – December 31, 2019**
#10 - Consider publishing a notice of sole source intent prior to engaging in non-competitive procurement	Completed draft of "Advance Contract Award Notice (ACAN)" SOP Advanced Contract Award Notice (ACAN) piloting has begun	Lack of resources/staff and management turnover	SOP will be finalized by September 2019 **Timeline for Completion – December 31, 2019**
#11 Expand and actively pursue alternate sourcing	M&P staff compiled a list of potential alternate parts, TTC technical staff have reviewed the list and identified some parts as approved subject to minimal testing (very short timeframe) other parts as approved subject to longer-term testing (up to a year)	Lack of resources/staff and management turnover	A SOP is being developed to formalize the alternate sourcing process - expected completion is end of September 2019 Alternate parts are being ordered for testing (to be completed in September 2019) - Parts that need minimal testing can be approved in September 2019; the potential savings for these parts are approximately $1.6 million annually

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Progress and Strategy Table for *Procurement Policies and Practices:*
Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
			Potential savings for the parts that require testing of up to two years are approximately $2.3 million annually Other parts may be identified for savings, the process is on-going and we will report on the matter in Q1 2020 per recommendation # 19 ***Estimated Savings for 2020 - $1.6 million***
#12 - Establish a comprehensive Blanket Contract policy and procedural requirements	Completed draft of "Blanket Contracts" SOP	Lack of resources/staff and management turnover	SOP to be finalized by end of September 2019 **Timeline for Completion – December 31, 2019**
#13 - Reduce annual purchase costs where feasible by establishing Blanket Contracts or expanding existing price agreements	Completed draft of "Blanket Contracts" SOP Efforts continue to create new blanket orders and add items to existing blanket orders Inventory Blanket orders have increased - In 2017 54% of Inventory orders were Blanket orders, 2018 58% and 2019 is averaging over 60%	Lack of resources/staff and management turnover	SOP will be finalized by end of September 2019 New P-Card Administrator started in September 2019 and will analyze P-Card spending for potential additions to or new blanket contracts **Timeline for Completion – December 31, 2019** ***Estimated Savings*** - ***Detailed analysis is still being completed to determine actual savings***
#14 - Ensure that all procurement policies, procedures, and forms are up to date and that staff have a single-point electronic access	Revised "Procurement Policy" is drafted and will be subject to Executive sign-off and Board approval Management has reviewed all applicable City of Toronto purchasing policies and procedures and retained a procurement consultant to update TTC's procurement policies and procedures	Lack of resources/staff and management turnover	Board approval of the Procurement Policy and related procedures is targeted for Q4 2019 M&P to work with ITS and Customer Communications to update M&P internal webpages for single point of access **Timeline for Completion – December 31, 2019**
#15 - Regularly report to the Board on TTC's procurement statistics	A report will be brought to the Board that contains procurement statistics and performance indicators	Lack of resources/staff and management turnover	The report will contain similar procurement information as listed in the City of Toronto's procurement report produced by its Purchasing and Materials Management Division

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**Progress and Strategy Table for *Procurement Policies and Practices:*
*Improving Materials Management and Purchasing Policies Can Potentially Result in Significant Savings, 2017***

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
and performance indicators			**Timeline for Completion – Q1 2020 (for 2019 stats)**
#16 - Review and enhance the monitoring and controls of the Purchase Card program	A new full time P-Card Administrator position was approved; the person started in September 2019	Lack of resources/staff and management turnover	The P-Card Administrator was hired and started in September 2019 to carry out a full P-Card program review including monitoring and controls A future P-Card audit will also be considered as part of ARC's Compliance Program **Timeline for Completion – December 31, 2019**
#17 - Explore ways to expand the current Purchase Card (P-Card) program	Starting in June 2017 users were required to use the P-Card to acquire non-stock goods for orders valued at $250 or less (eliminating the need for Purchase Requisitions to be sent to M&P) The $250 threshold is planned to increase to $3,000 with the hiring of a new P-Card Administrator (newly created position)	Lack of resources/staff and management turnover	The requirement to use the P-Card for materials under $3,000 will become effective by the end of 2019 and will eliminate approximately 2,690 (35%) non-stock low-value purchase requisitions currently being processed by M&P A new P-Card Administrator started in September 2019 to support this initiative **Timeline for Completion – December 31, 2019** ***Estimated Savings - $25,000 annually in P-Card rebates may be realized from increased P-Card usage***
#18 - Ensure the Purchase Card process is considered when reviewing and revising TTC procurement policy dollar thresholds	Revised "Procurement Policy" including P-Card thresholds	Lack of resources/staff and management turnover	Board approval of the new Procurement Policy is targeted for Q4 2019 **Timeline for Completion – December 31, 2019**
#19 - Report to the Board on an annual basis on savings achieved as a result of implementing the recommendations from this report	Management will report to the Board annually (on the previous fiscal/calendar year results) with the first report in Q1 2020	Lack of resources/staff and management turnover	**Timeline for Completion – Q1 2020**

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**Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase One:*
*Bus Maintenance and Warranty Administration, 2014***

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#3 - Ensure that bus kilometer records used for scheduling preventive maintenance inspections are accurate	At the time of the AG's audit TTC was using an aging and inaccurate CIS system to record mileage for the purposes of its bus maintenance program Clever Devices CAD/AVL Hardware has now been installed on the entire TTC bus fleet which allows for automated tracking of bus kilometers	The delay in the installation of the system was due to Clever Devices parts shortages Multiple revisions to Vision software were also required	New technology has increased the accuracy of the kilometer reports used to support preventative maintenance Staff have confirmed that Clever Devices has met the Vision contract requirement of reporting distance travelled and hours of service operation This has been achieved to reflect actual mileage traveled with a less than 2% variance **This item is considered complete by management.**
#8 - Establish standard repair times (SRT) for common bus repairs	In 2014, Bus Maintenance staff were informed of the future implementation of Standard Repair Times (SRT) 2014-2016 SRTs were established for various sections of Duncan Shop Brake reline SRT reduced from 12 hours to 10 hours for Coach Technicians 2017-2018 SRTs were initiated at Eglinton Garage using Vehicle Work Order (VWO) software to establish a process that can be deployed to all bus garages 2017 & 2018 Refresher sessions were completed on how to record repair information accurately for Coach Technicians	Process to establish standard repair times took significant effort and followed a phased approached to validate effectiveness	SRTs will be established for common parts at all bus garages by Q1-2020 ITS Department will integrate SRT's into the VWO system to ensure labour hours are tracked and measured against the established SRTs (to be completed Q2-2020) Management will review high repair times with employees with an emphasis on coaching to improve productivity. Work Efficiency Reports will be reviewed quarterly by Vehicle Reliability Group and communicated to bus garages and shops **Timeline for Completion - Q2-2021** ***Estimated Savings for 2020 - $194,000 annually based on drum brake relines only at Duncan Shop (Reduction of 4 Coach Technician positions)***
#10 - Assess internal bus rebuild program	In 2015, TTC conducted a cost comparison which confirmed that	Strategy was a staged approach that was developed and	TTC will no longer rebuild engines and transmissions by Q4 2020

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**Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase One:
Bus Maintenance and Warranty Administration, 2014***

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
	rebuilding engines internally was no longer cost effective because of changes in technology and standards Beginning in 2015, Bus Maintenance has gradually moved away from internally rebuilding engines to purchasing OEM remanufactured engines with applied 2-year warranties In 2017 the bus rebuild schedule was altered to a 6-year cycle with the introduction of a 13-year bus	implemented over the past 5 years	**This item is considered complete by Management**
#11 - Complete analysis of internal bus rebuild costs at the Duncan Shop	TTC has realigned its Duncan Shop business strategy to perform out of warranty repairs rather than complete unit overhauls A repair rather than rebuild strategy has been implemented for components such as Bus Mirrors, Brake Calipers, Stub Axles and Door Components Since 2014, Bus Maintenance has reduced the items it rebuilds by roughly 72%	Strategy was a staged approach that was developed and implemented over the past 5 years	The hiring of an Engineering Technologist (Warranty ET) to support future data collection for new and repaired parts is planned **As the analysis is complete, this recommendation is considered closed by Management** *Estimated Savings - detailed analysis is still being completed to determine actual savings*
#12 – Improve the current defective parts retrieval process	VWO software now governs the parts retrieval process - prior to delivering a replacement part the software system requires the return of a Warranty Core component	Delays in hiring warranty support (Warranty ET) No VWO warranty functionality to support returning defective parts, manual process only	The long term plan for aftermarket parts is to imbed warranty provisions in the VWO system so that warrantable parts that are replaced within the manufacturer's warranty period are flagged. Contracts to be amended with date of installation as the start date for the warranty period if possible

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Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase One:*
Bus Maintenance and Warranty Administration, 2014

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
		Most component contracts state warranty begins on date of receipt rather than date of install Lack of parts serialization	Conduct a process review to track aftermarket warranty parts at Birchmount Garage Q3-2019 VWO warranty provisions expected by Q2-2020 Analyze effectiveness of application Q2-Q4, 2020 **Timeline for Completion – Q4-2020**
# 13 - Maximize the use of bus warranty	The warranty process has been optimized and documented for new bus procurements Claims submission rate has increased by 135% since 2015 A warranty tracking dashboard to monitor claims has also been developed	Insufficient resources to fully implement the warranty program The warranty team has been increased from 5 to 8 (2 additional staff and 1 consultant) however, 3 staff positions in the warranty team are currently vacant	IT staff are working on a number of warranty related software updates including dashboards to monitor part issued/return data Quality testing and full implementation of the dashboard will be implemented by Q4 2019, allowing staff to monitor warranty work on new vehicles TTC achieved 99% claims success rate for new bus warranty in 2019 which will deliver an estimated $7 million in cost savings **Timeline for Completion – December 31, 2019** ***Estimated Savings for 2020 - $5 million***
# 15 - Ensure proper accounting procedures for bus warranty claims and payments	Accounting procedures to track claim and payments for bus warranty exist	Existing projects have established contracts in place that govern how warranty is to be administered	Accounting procedures have been optimized for administration of bus warranty Procedures for existing rail procurement projects will be created/revised to be consistent with bus by December 31, 2019 All new procurements will include contractual clauses to govern warranty process in a consistent manner **Timeline for Completion – December 31, 2019**

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**Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase Two:
Non-Revenue Fleet and Equipment Management and Maintenance, 2015***

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#2 - Consider implementing a chargeback process or other measures for non-revenue vehicle and equipment costs	Decision was made to use GPS technology to provide data on usage, location and service hours of non-revenue vehicles and equipment Data will drive future decisions in terms of cost allocation for non-revenue vehicles and equipment across user depts	2015/2016 GPS pilot failed 2017/2018 Clever Devices GPS pilot succeeded Installation delayed due to Clever Devices staff working on the Vision bus deficiencies Hardware manufacturer Pointer delayed in producing required modules 4G software required to be tested with TTC's AVL	GPS data will be reviewed to explore opportunities for more cost effective approaches including lease rather than own or shared services models Interim steps have been taken to investigate more cost effective models for non-revenue vehicles and equipment at new garages GPS installation is scheduled to begin in Q4-2019 **Timeline for Completion – Q4 2020**
#4 - Conduct detailed reviews of utilization levels of non-revenue vehicles and equipment	GPS data will provide an accurate tracking of departmental vehicle use and equipment movement to determine if alternate or shared vehicle supply may be an option	See above	**Timeline for Completion – Q4 2020**
#7 - Ensure that vehicle life cycle costs are actively monitored	The TTC has adopted the City of Toronto's vehicle replacement criteria and are utilizing it to determine vehicle condition	Non-stock coded parts are not tracked per vehicle number in the Vehicle Work Order (VWO) system, thus life cycle costs are difficult to determine Additional resources are required for manual entry of parts	TTC will improve tracking of corrective maintenance costs through the VWO system and develop a Standard Operating Procedure to capture the non-revenue vehicle life cycle **Timeline for Completion – Q1 2020**
#13 - Take steps to improve non-revenue vehicle user compliance with scheduled maintenance	Since the audit in 2015, maintenance status reports have been sent semi-monthly to users highlighting missed and upcoming preventative maintenance appointments	See #2 for issues with GPS implementation	Once GPS hardware is installed, staff can locate vehicles and, if necessary, conduct maintenance where the vehicles are located or bring them in for scheduled work GPS will also aid in optimizing scheduled maintenance, reducing missed or unnecessary maintenance **Timeline for Completion – Q4 2020**

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Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015*

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#14 - Ensure accurate tracking of non-revenue vehicle kilometer data	Non-Revenue vehicle mileage is observed and recorded in the VWO system when vehicles are brought in for preventative maintenance	Manual processes are slow and subject to human error	The installation of GPS hardware will improve accuracy of vehicle kilometer reports **Timeline for Completion – Q4 2020**
#15 - Improve the effectiveness of the Vehicle Work Order system for non-revenue fleet	Staff has been granted VWO system access An upgrade was also implemented in Q3 of 2018 allowing Technicians to input various vehicle repair comments directly into the system GPS will also aid in optimizing scheduled maintenance, reducing missed or unnecessary maintenance	Duncan Shops was the last facility in Bus Maintenance to implement the VWO system as there were modifications required to suit this business model	Installation of GPS hardware and integration with VWO will further improve the effectiveness of the VWO **Timeline for Completion – Q4 2020**
#16 - Develop and implement non-revenue fleet quality assurance processes	A formal quality assurance process is in place consisting of: - A mandatory MTO inspection and road test post repair to verify the quality of repairs prior to release of the vehicle to the user group - KPI's including "repeater repairs" Forepersons have always conducted MTO quality inspections and road tests to verify the worker inspection and quality of workmanship Q2, 2019 KPI reports were developed and are continuously monitored	Lack of dedicated resources	**Management considers this item complete**

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Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015*

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#17 - Ensure adequate controls are in place at TTC garages to deter and detect ordering of non-revenue vehicle and equipment parts for non-TTC uses	Obtaining stock coded parts will be restricted to the non-revenue stockroom only by Q4-2019 Non-stocked coded parts purchased through a credit card are reconciled by the facility Manager Non-stocked coded parts purchased through a Purchase Authorization (PA) are signed off by facility staff Non-stocked coded parts purchased through a contract would be verified by the System Contract Administrator TTC - VRQA staff conduct parts audit in 2017 and found all parts on TTC non-revenue vehicles The next audit is planned for Q4-2019	Resource issues in Vehicle Reliability & Quality Assurance (VRQA) prevented the 2018 audit	Stock coded parts will have to be restricted to the non-revenue stockroom only **Timeline for Completion – Q4 2019**
#18 - Shorten garage service turnaround time for non-revenue fleet	Since 2016, Bus Maintenance has worked with M&P to shorten parts delivery times under existing contracts, when those contracts are up for renewal New facility (1810 Markham Road) will be better suited, as it will be tailored to maintaining a larger Non-Revenue Fleet The installation of GPS will optimize the servicing of the non-revenue fleet by ensuring underutilized and over utilized vehicles and equipment are serviced at required intervals	The Contract Administration staff was moved from the Lakeshore facility to the Duncan Shop facility in Q3, 2018 to improve service contracts administration. The Duncan Shop Contract Administrators are more experienced and can provide better coverage during absence New facility (1810 Markham Road) requires additional modifications to be ready for service Q2, 2021	Some contract administrative staff are being reallocated under the Non-Revenue Fleet Manager in 2020 to assist with parts turnaround TTC will shorten turnaround times by performing repairs for vehicles weighing under 4,500kg at the new 1810 Markham Road garage GPS will improve the maintenance schedule, which will reduce the service turnaround time **Timeline for Completion – Q4 2020**

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Progress and Strategy Table for *Bus Maintenance and Shops Department, Phase Two: Non-Revenue Fleet and Equipment Management and Maintenance, 2015*

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#20 - Establish a formal warranty management process for non-revenue vehicles and fleet equipment	Non-Revenue staff manages warranty through the VWO system and deal directly with dealers/manufacturers for repairs TTC technicians only perform warranty repairs if the costs are insignificant and it is more advantageous to keep the vehicle in-service for the user group	No warranty work is completed unless authorized by the Foreperson	**Management considers this item complete**

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Progress and Strategy Table for *Accounts Payable Functions:*
Improving Invoice Verification and Vendor Account Management, 2017

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#1 - Review the results of the sampled invoices and potential overpayments	Total potential overcharges identified by AG was $5,144 Management reviewed the nature of each overpayment and was successful in recovering $483.51 TTC also recovered an additional $10,000 from one vendor due to the systematic nature of the issue Management identified certain process changes to address the root cause of the overbillings, leading to training opportunities to mitigate future overbilling risk Purchase orders set up incorrectly have been corrected	Staff turnover	Invoice reconciliations continue to identify subsequent overbillings for recovery, if any Spot audits on vendors identified in this recommendation are being carried out **Timeline for Completion – December 31, 2019**
#2 - Enhance the existing invoice verification processes to provide reasonable assurance that invoices are paid according to the contract terms and prices	Guidelines and training for user department invoice approvers on the importance of invoice verification and the specific information that should be reviewed prior to invoice approval has been delivered	Staff turnover and delay in hiring dedicated position to perform audit work	New spot audit process implemented to ensure invoices have been adequately reviewed and approved - consistent with contract terms and pricing Reports to be developed to convey results to Department Heads, and to identify training opportunities Revive M&P/AP working group to communicate training opportunities **Timeline for Completion – December 31, 2019**
#3 - Maintain a reasonably accurate and complete Vendor Master File (VMF)	October 2016 - Purged large number of duplicate and inactive accounts during comprehensive review of VMF reducing	Resource constraints to update procedures.	Establish a working committee with representation from M&P and AP through which VMF issues can be

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Progress and Strategy Table for *Accounts Payable Functions:*
Improving Invoice Verification and Vendor Account Management, 2017

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
to minimize the risk of duplicate or incorrect payments to vendors	the number of vendors from 39648 to 4,324 A subsequent vendor clean-up exercise was completed in September 2017 Annually, staff will expire suppliers that have not had activity for 18 months after the last payment was processed System functionalities that enable AP staff to update "remit to" address improved to ensure payment is sent to correct address/Payee		addressed with an aim to ensuring the data is complete and accurate A draft VMF procedure will be finalized and implemented by year-end **Timeline for Completion – December 31, 2019**
#5 - Review the current payment process and identify opportunities to further reduce the number of late payments and to take advantage of early payment discounts	Currently, the Discounts Expiring Report is distributed to AP staff and Materials Management daily Staff are working with the TTC's Construction Lien Act Working Group to review the payment process in order to comply with the 28 day prompt payment requirement under the new Construction Act	Approved invoices not being returned to Finance on time for payment Bottlenecks currently being identified and reviewed to inform changes to the payment process	AP will strengthen opportunities for early payment discounts by: - Developing a process for monitoring to ensure compliance - Reviving and enhancing the Discounts Taken and Lost Report; including identifying reasons why discounts were not taken - Implement regular distribution of the report to Department Heads AP will implement changes arising out of recommendations from the Construction Lien Act Working Group to expedite the payment process to reduce late payments **Timeline for Completion - March 31, 2020** ***Estimated Savings for 2020 - $20,000***

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Progress and Strategy Table for *Accounts Payable Functions:*
Improving Invoice Verification and Vendor Account Management, 2017

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#6 – Enhance current cheque request policies to ensure adequate use of cheque requests by staff	Completed "Authorization for Non PO Payments" schedule which identifies allowable non-purchase order payments (i.e. invoices that can be paid by cheque request without a purchase order) The schedule is equivalent to the City's "Schedule A" and is part of the TTC's updated Procurement Policy Cheque requests will be reviewed in accordance with this schedule	Staff turnover	"Authorization for Non PO Payments" schedule will be approved with the updated Procurement Policy at the December 2019 Board meeting **Timeline for Completion – December 31, 2019**
#8 - Increase the use of Electronic Fund Transfer (EFT) for vendor payments	Implemented EFT for all US vendors paid in Canadian currency	Lack of available resources to focus on this initiative	EFTs will be enabled for all cross border transfers (USD payments) by the end of September 2019 Distributed target communication to high volume vendors not currently on EFT New construction contracts entered into after October 1, 2019 will require vendors to accept payment by EFT Working with M&P to require vendors to sign up for EFT **Timeline for Completion – December 31, 2019** ***Estimated Savings – Increased use of EFTs in 2020 will result in gradual reduction of cheque supply costs***
#9 – Identify opportunities to further improve the efficiency of the duplicate payment identification and verification process	Service Request for enhancements to duplicate payments report submitted on October 2, 2018 Report deployed to production on June 26, 2019	Lack of available resources to analyze data and determine criteria required to improve results	Implement enhanced reporting to further improve duplicate payment identification **Timeline for Completion – December 31, 2019**

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**Progress and Strategy Table for *Continuous Controls Monitoring Program:
Toronto Transit Commission, Employee Overtime and Absenteeism 2015 & 2016***

Recommendation	Progress/Actions to Date	Challenges to Fully Implement the Recommendation	Strategy to Fully Implement and Timeline to Completion
#1 - Ensure that effective reports for reviewing and monitoring overtime and absenteeism expenses by individual departments and the organization as a whole be developed	Department and corporate level overtime reports have been designed using SAP payroll data The overtime report was successfully piloted in the Operations Group, resulting in improved oversight of OT and cost reductions A data analyst was hired to review existing absenteeism reports and is currently analyzing SAP reporting capabilities to align with the overall corporate Absenteeism Strategy	Report analysis and capabilities were dependent on full rollout of SAP implementation which was delayed	Overtime - Complete implementation plan for the launch of corporate overtime reporting and continuous monitoring by year-end Absenteeism – Consultations with Executive and business leaders continue to finalize the Absenteeism Strategy SAP exception reporting capabilities will be utilized to support the Strategy The AG's recommendation will be fully implemented with the rollout of the Absenteeism Strategy and associated reports

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